

Appl. No. 10/637,221  
Reply to Office Action of January 5, 2010  
Amendment Dated May 5, 2010

**REMARKS**

Claims 1-46 and 48-53 stand rejected. Claim 47 was previously cancelled.

Claims 1, 28, 41, and 46 have been amended herein. Therefore, claims 1-46 and 48-53 are pending and at issue.

Claim 46 stands objected to regarding the alleged omission of the term "adapted." Applicants had previously amended claim 46 as suggested by the Examiner and therefore, this objection should have been withdrawn. Applicants believe that this objection is the result of a typographical error by the Examiner.

Claims 1, 2, 6, 7, 9, 10, 17-20, 21, 24-38, 41-46 and 49-53 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Carr. This rejection should be withdrawn as Carr fails to disclose one or more features recited in the claims as currently amended. Specifically, Carr fails to disclose or suggest, amongst other features, receiving reflected microwave energy. Further, Carr is distinguishable as Carr requires a comparison of a patient's two breast, Carr is incapable of creating a 3D image and otherwise teaches away from compressing a patient's breast as would result from lying prone as such compression would interfere with the temperature distribution. These deficiencies will be discussed below with reference to the specific independent claims to which they pertain.

**Directing a predefined waveform and receiving energy resulting therefrom**

Independent claim 1 recites a microwave assembly for directing a predefined waveform to the breast and receiving reflected microwave energy from the breast under

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examination resulting from the predefined microwave waveform (the remaining independent claims recite similar features). Carr simply fails to disclose or suggest these features, and, in fact, is directed to an entirely different form of technology which does not use reflected microwave energy. Applicants would like to point out that it appears that the Examiner is confusing or otherwise not appreciating the difference between reflected energy as recited in the present claims and emitted energy as found in Carr.

As recited in all of the pending claims, the apparatus and/or methods recited all direct a predefined microwave waveform to the patient. Carr simply fails to disclose or suggest directing, transmitting or otherwise sending any microwaves towards the patient, let alone a predefined waveform. Instead, Carr is directed to a passive system that simply receives emitted energy from the patient. As discussed throughout Carr, the reference is directed exclusively to detecting emitted low energy and in fact focuses on the use of a Dicke type radiometer. As discussed in the attached document, a Dicke type radiometer is a receiver to measure weak signals in the presence of noise. A Dicke radiometer is only a receiver and not used to direct or transmit microwave waveforms at all. Therefore, Carr is detecting the noise and weak signals emitted from the patient without any additional microwave waveforms being directed to the patient which may be reflected to aid in detection.

Applicants have further highlighted this distinction as the present claims, recite detecting the reflected microwave energy that results from the predefined microwave waveform that is directed to the patient. As Carr fails to direct any predefined

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microwave waveforms to into the patient, it obviously cannot receive the reflected microwave energy that results from the predefined microwave waveforms that are directed into the patient. Therefore, for at least these reasons, the rejection of claims 1, 2, 6, 7, 9, 10, 17-20, 21, 24-38, 41-46 and 49-53 should be withdrawn and the claims allowed.

**Carr requires a comparison of a patient's two breasts**

Independent claim 41 recites generating a 3D generated scan image of the breasts using reflected microwave energy from each breast independently resulting from the predefined microwave waveform. Carr simply fails to disclose such features, and in fact, teaches away from such features. As discussed throughout Carr, based on the type of technology used, it is required that the patient's breasts are compared to create any usable information. For example, in the Summary of Invention in Carr, the reference specifically states that it makes a temperature comparison at corresponding locations on the patient's breasts. This comparison is required to help decipher between the weak signals and the noise detected. Therefore, if a patient has already had one breast removed, Carr's system would be useless as there would be no baseline for comparison of the detected weak signals and noise. For this additional reason, the rejection of claim 41 should be withdrawn.

**Carr cannot generate a 3D image**

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As discussed above, claim 41 also recites generating a 3D generated scan image of the breasts using reflected microwave energy from each breast independently resulting from the predefined microwave waveform. Carr is incapable of generating such a 3D image. Specifically, as discussed above, Carr is directed to a passive system for detecting weak energy and noise emitted from a patient's breast. These signals can only be detected as they are emitted from the surface of the breast. There is no teaching or suggestion that such signals could be detected subcutaneously to generate data for a 3D image. Therefore, for this additional reason, this rejection of claim 41 should be withdrawn.

**Carr teaches away from having a patient in a prone position**

As discussed throughout Carr, the reference discusses that the detection and analysis is very sensitive to changes in temperature of the patient's breasts. Therefore, Carr teaches that it is important to prevent disturbing the breast surface temperature distribution. In fact, Carr discusses at column 3, lines 30-41 the disadvantages in prior systems where the patient's breasts are compressed. Compression changes the blood flow to the breasts which resultantly changes the temperature distribution and the accuracy of the results. Carr seeks to avoid such disruption in temperature profiles by having the patient in a supine position. Therefore, Carr teaches away from compression, which would result if the patient were positioned in a prone position.

**Dependent claims**

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Claims 3-5, 8, 21 and 22 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Carr in view of Meaney. This rejection should be withdrawn as Carr and Meaney, when each taken alone or in combination, fails to disclose or suggest one or more recited features in the claims. As acknowledged by the Examiner in the June 24, 2009 Office Action, the combination of Carr and Meaney is improper and fails to disclose or suggest one or more features recited in the claims and was therefore withdrawn. Applicants believe that the presently stated rejection is a typographical error as the rejection was previously withdrawn and no new grounds or analyses have been presented herein.

Furthermore, as discussed above, Carr fails to disclose one or more features recited in the independent claims from which claims 3-5, 8, 21 and 22 depend. Meaney adds nothing regarding these deficiencies. therefore the rejection under 35 U.S.C. § 103(a) over Carr in view of Meaney '943 is withdrawn. Therefore, this rejection should also be withdrawn.

Claims 11, 12, 13-16 and 39-40 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Carr in view of Haddad. This rejection should be withdrawn. As discussed above, Carr fails to disclose or suggest one or more features recited in claims 1 and 28. Haddad adds nothing in regards to these deficiencies. Therefore, as claims 11, 12, 13-16 and 39-40 depend from either claim 1 or claim 28, the rejection should be withdrawn and the claims allowed.

Claims 23 and 48 stand rejected under 35 U.S.C. § 103(a) over Carr in view of Horton. These claims depend on independent claims 1 and 46. As discussed above,

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Carr fails to disclose or suggest one or more features recited in these independent claims. Horton adds nothing regarding these deficiencies. Therefore, for similar reasons, this rejection should be withdrawn and the claims allowed.

Applicants respectfully request entry of the present amendment, reconsideration of the rejection of claims 1-46 and 48-53 and allowance of the case. The Patent Office is authorized to deduct any fees from Deposit Account No. 19-1351 to cover any additional fees. If such a withdrawal is made, please indicate the attorney docket number (33281-400290) on the account statement.

Applicants believe the present amendment places the application in condition for allowance. However, if the Examiner determines that the application is not yet allowable, Applicants request the Examiner contact the undersigned attorney.

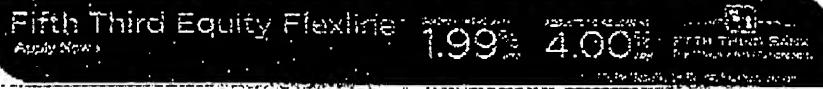
Respectfully submitted,

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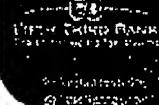
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Dicke radiometer A radio receiver designed to measure weak signals in the presence of noise; also known as a Dicke receiver. The input to the receiver is rapidly switched (by a Dicke switch) between the antenna and a reference noise source. It is useful where accurate measurements of absolute flux are required, and has been used to measure the very weak signal from the cosmic microwave background. It is named after R. H. Dicke.

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